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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/561,859	12/21/2005	Andrei Mijiritskii	NL030775	2987
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EXAMINER				
BUTCHER, BRIAN M				
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4113				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/561,859

Applicant(s)

MIJIRITSKII, ANDREI

Examiner

BRIAN BUTCHER

Art Unit

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Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 16 May 2007
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Inventor's Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Specification

The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

A substitute specification **excluding** the claims is required pursuant to 37 CFR 1.125(a) because **the separate sections of the specification are not identifiable.**

A substitute specification must not contain new matter. The substitute specification must be submitted with markings showing all the changes relative to the immediate prior version of the specification of record. The text of any added subject matter must be shown by underlining the added text. The text of any deleted matter must be shown by strike-through except that double brackets placed before and after the deleted characters may be used to show deletion of five or fewer consecutive characters. The text of any deleted subject matter must be shown by being placed within double brackets if strike-through cannot be easily perceived. An accompanying clean version (without markings) and a statement that the substitute specification contains no new matter must also be supplied. Numbering the paragraphs of the specification of record is not considered a change that must be shown.

The use of the trademark **BLU-RAY** has been noted in this application. It should be capitalized wherever it appears and be accompanied by the generic terminology.

Although the use of trademarks is permissible in patent applications, the proprietary nature of the marks should be respected and every effort made to prevent their use in any manner which might adversely affect their validity as trademarks.

The disclosure is objected to because of the following informalities: On **page 1**, **line 24**, "**which medium two information**" appears to need a change to "**which two information**". Appropriate correction is required.

The disclosure is objected to because of the following informalities: On **page 3**, **line 8**, "**which modification**" appears to need a change to "**where modification**". Appropriate correction is required.

The disclosure is objected to because of the following informalities: On **page 3**, **line 22**, "**and 0.84 a tri stack BD**" appears to need a change to "**and 0.84_a tri stack BD**". Appropriate correction is required.

The disclosure is objected to because of the following informalities: On **page 7**, **lines 31-32**, "**than depending on . . . the third BD-R stack the boundaries of . . . second stack shift as indicated in**" appears to need a change to "**then depending on . . . the third BD-R stack_the boundaries of . . . second stack shift are indicated in**". Appropriate correction is required.

The disclosure is objected to because of the following informalities: On **page 3**, **line 6** and on **page 9, line 3**, "**dual stack BD**" appears to need a change to "**dual-stack BD**" (See page 3, line 4, "dual-stack"). Appropriate correction is required.

Drawings

Figure 1A should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid

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abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 7 provides for the use of a multi stack optical data storage medium, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Holster et al. (United States Patent 4,450,553), hereinafter referenced as Holster, in view of Woerlee et al., (United States Patent 7,218,603), hereinafter referenced as Woerlee, and further in view of Tieke et al. (United States Patent Application Publication 2005/0042545), hereinafter referenced as Tieke.

Regarding **claim 1**, Holster discloses a multilayer information disc which reads on the multi stack optical data storage medium claimed. First, Holster discloses a three-layer information disc (column 11, lines 15-49 and figure 5) which reads on "A multi stack optical data storage medium . . . having at least a first substrate (See figure 5, item 41) . . . a first layer stack, comprising a first information layer (See figure 5, item 54) . . . a second layer stack, comprising a second information layer (See figure 5, item 49) , said second layer stack being present at a position closer to the first entrance face than the first layer stack (See figure 5, location of items 49 and 54), separated from the first layer stack by a first transparent spacer layer (See figure 5, item 52)" claimed. Second, Holster discloses an information track, a resin layer, and a dielectric layer (column 11, lines 15-21 and figure 5 items 42,43,44) which reads on "a third layer stack, comprising a third information layer (See figure 5, item 43), [that] is present at a position closer to the first entrance face (See figure 5, location of items 42,43, and 44 closest to entrance of laser beam 57), separated from the second layer stack (See figure 5, location of items 43 and 49) by a transparent spacer layer (See figure 5, item 47)" claimed. Third, Holster discloses that the information tracks already contain written information (column

11, lines 53-54) which reads on "the third information layer [being] of a type selected from the group of types consisting of a read only layer and a write once layer" claimed because the information has already been written and can only be read from the optical disc. However, Holster fails to disclose "the first and the second layer stack each having an effective radiation beam reflection R_{eff} between 0.04 and 0.08" or the "third layer stack having a radiation beam transmission T_3 larger than 0.70". The examiner maintains that it was well known in the art for the multilayer information disc disclosed in Holster to include an effective radiation beam reflection between 0.04 and 0.08 for the first and second stacks, as taught by Woerlee. Also, the examiner maintains that it was well known in the art for the multilayer information disc disclosed in Holster to include a radiation beam transmission of 0.70 for a third stack, as taught by Tieke.

In a similar field of endeavor Woerlee discloses an optical data storage medium having two stacks that have effective optical reflection values between 0.03 and 0.18, typically being 0.07 (column 3, lines 53-59) which reads on "the first and the second layer stack each having an effective radiation beam reflection R_{eff} between 0.04 and 0.08" claimed. Also, in a similar field of endeavor Tieke discloses an optical data storage medium that has a transmission between 45% and 75% for an upper recording stack (page 1, paragraph [0014] and figures 1a, 1b) which reads on the "third layer stack having a radiation beam transmission T_3 larger than 0.70" because the third layer stack is similarly located closest to the radiation incident surface of the optical disc like the upper recording stack.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by specifically using the teachings in Woerlee to have effective optical reflection values between 0.04 and 0.08 for the first and second layer stacks because one having ordinary skill in the art would want to ensure that the layers of the multilayer information disc were compliant with a given recording/playback specification or standard. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by specifically using the teachings in Tieke to provide an upper recoding stack having a radiation beam transmission T_3 larger than 0.70 because one having ordinary skill in the art would want to be able to read from or write to the two layers farthest away from the incident radiation without the layer closest to the incoming incident radiation interfering.

Regarding **claim 2**, Holster, Woerlee, and Tieke, the combination of hereinafter referenced as HWT, disclose everything claimed as applied above (see claim 1). In addition, HWT disclose a multi-stack optical storage medium containing rewritable layers. Specifically, Woerlee discloses that the multi-stack optical medium is rewritable using a focused radiation beam and that both recording stacks include a phase change type recording layer (column 7, lines 24-30) which reads on "at least one of the first and second information layer [being] a rewritable layer" claimed because both layers are rewritable.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by

specifically using the teachings in Woerlee to include rewritable layers because one having ordinary skill in the art would want to be able to increase the versatility of the optical recording media.

Regarding **claim 3**, HWT disclose everything claimed as applied above (see claim 1). In addition, HWT disclose a multilayer information disc that includes a reflective layer next to a third recoding layer. Specifically, Holster discloses a first information layer that is covered with a partially light-transmitting dielectric layer that reflects incident radiation (column 11, lines 15-21 and figure 5 items 43,44) which reads on "a reflective layer [being] present adjacent the third information layer comprising a dielectric" claimed.

Regarding **claim 4**, HWT disclose everything claimed as applied above (see claim 1). In addition, HWT disclose a multilayer information disc that includes a third information layer which is a read only layer and a third layer stack having a radiation beam transmission between 0.86 and 0.91. Specifically, Holster discloses that all information tracks already contain written information (column 11, lines 53-54) which reads on "the third information layer [being] a read only layer because the information has already been written and can only be read from the optical disc. Also, Tieke discloses that the outer most layer, L_0 , has a transmission from 0.86 to 0.91 for an effective reflection between 0.04 and 0.08 (page 5, paragraph [0083] and figure 1a) which reads on "the third layer stack [having] a radiation beam transmission T_3 between 0.86 and 0.91" claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by specifically using the teachings in Tieke to provide an upper recoding stack (upper: closest to incident radiation) having a radiation beam transmission T_3 between 0.86 and 0.91 because one having ordinary skill in the art would want to be able to read from or write to the two layers farthest away from the incident radiation without the layer closest to the incoming incident radiation interfering.

Regarding **claim 5**, HWT disclose everything claimed as applied above (see claim 1). In addition, HWT disclose a multilayer information disc that includes a third information layer which is a write-once layer and a third layer stack having a radiation beam transmission between 0.81 and 0.81. Specifically, Tieke discloses a write-once type recoding layer L_0 located nearest the incoming path of incident radiation (page 5, paragraph [0085] and figure 2 item 6) which reads on "the third information layer [being] a write-once layer. Also, Tieke discloses that the outer most layer, L_0 , has a transmission from 0.81 to 0.84 for an effective reflection between 0.04 and 0.08 (page 5, paragraph [0083] and figure 1a) which reads on "the third layer stack [having] a radiation beam transmission T_3 between 0.81 and 0.84" claimed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by specifically using the teachings in Tieke to provide an upper recording layer (upper: closest to incident radiation) that is a write-once layer because one having ordinary skill in the art would want to be able to increase the versatility of the optical recording media

over that of a read only media. Also, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by specifically using the teachings in Tieke to provide an upper recoding stack (upper: closest to incident radiation) having a radiation beam transmission T_3 between 0.81 and 0.84 because one having ordinary skill in the art would want to be able to read from or write to the two layers farthest away from the incident radiation without the layer closest to the incoming incident radiation interfering.

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holster et al. (United States Patent 4,450,553), hereinafter referenced as Holster, in view of Woerlee et al. (United States Patent 7,218,603), hereinafter referenced as Woerlee, further in view of Tieke et al. (United States Patent Application Publication 2005/0042545), hereinafter referenced as Tieke, and further in view of Miyamoto et al. (United States Patent 6,231,945), hereinafter referenced as Miyamoto.

Regarding **claim 6**, HWT disclose everything claimed as applied above (see claim 1). However, HWT fail to disclose a multilayer information disc "wherein a second radiation beam entrance face opposite to the first entrance face is present for recording and reading by means of a focused radiation beam, entering the medium through the second entrance face, in a fourth, fifth and sixth stack identical to the respectively the first, second and third stack". The examiner maintains that it was well known in the art for the multilayer information disc disclosed in Holster to include the ability to read and write on both sides, as taught by Miyamoto.

In a similar field of endeavor Miyamoto discloses an information recording medium having recording layers located on opposite sides of a disk where each recording layer can only be read from or written to using incident radiation on the corresponding sides of the disk (column 8, lines 18-30 and figure 1 items 5, 5') which reads on "a second radiation beam entrance face opposite to the first entrance face is present for recording and reading by means of a focused radiation beam, entering the medium through the second entrance face, in a fourth, fifth and sixth stack identical to the respectively the first, second and third stack" claimed because the teaching is extendable to a plurality of layers on each side of a disc.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the multilayer information disc of Holster by specifically using the teachings in Miyamoto to have a double sided disk with a plurality of recording layers on each side because one having ordinary skill in the art would want to combine the data storage capacity of two or more separate discs into one disc.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian M. Butcher whose telephone number is (571) 270 – 5575. The examiner can normally be reached on Monday - Friday 7:30am - 5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's trainer, Jefferey F. Harold can be reached at (571) 272 – 7519. The fax phone number for the organization where this application or proceeding is assigned is (703) 872—9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305 – 4800.

BMB

July 24, 2008

/Jefferey F Harold/

Supervisory Patent Examiner, Art Unit 4113